SUAS

PORTABLE COMPACT HOISTS

User Manual

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Introduction

The Suas Portable Hoist is an electrical operated patient lifting hoist, suitable for multi-patient usage, with a maximum safe working load of 140kg. This hoist is primarily designed for patient transfer only from a seated position but can be used to transfer from a supine position. This hoist may be used for a range of transfers including from a bed, toileting chair or shower chair and can also enable patient transfer from a wheelchair into the seat of a motor vehicle comfortably and safely. All the afore mentioned transfers are only possible following a thorough risk assessment by a competent person. When not in use the lightweight hoist can be easily folded and placed in the boot of a motor vehicle.

The hoist, having being load tested at point of manufacture, will be partially disassembled and shipped to the Customer. Accompanying the product is a copy of the User Manual and a Test Certificate.

The test certificate is valid for 6 months and upon it's expiry the hoist should be inspected and serviced periodically (see service/maintenance section). Suas recommends that the hoist is serviced every 6 months.

The Suas 140s hoist has a warranty on all parts of 24 months from date of purchase excluding the battery which has a warranty of 12 months from date of purchase. By following the recommended servicing maintenance, daily checks and country specific load test requirements this hoist has a minimum life cycle of 5 years.

This hoist is CE marked to the Medical Device Directive 93/42/EEC and also meets the requirements of the EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC.

Assembly Instructions

- Open the box
- Unwrap all items wrapped in bubble wrap.
- You will then have the following pieces of the Suas 140S hoist
  1. Base,
  2. Upright(A),
  3. Boom attached to upright (B),
  4. Handset plugged into battery,
  5. Actuator.
  6. Actuator lead to battery

See attached diagram.

- The three one piece bolts are in their correct position.
- The two black tightening knobs are in their correct position.
- Place base on the floor, with wheels touching the ground.
- Ensure black tightening bolts are unwound but still attached.
- Insert Upright (A) into the base
- Remove bolt at the top of upright (A)

- Insert upright (B) into upright (A).
- Insert bolt and close bolt.
- Remove bolt on upright (A) and attach the base of the Actuator.
- Replace bolt and close bolt.
- Remove bolt from boom and attach the top of the Actuator.
- Replace bolt and close bolt.
- Attach Actuator lead to the battery and to the base of the Actuator.
- Place handset at the back of the boom on hook provided.
- Tighten the two black knobs.
- Ensure all bolts are correctly inserted and closed.
- Ensure that red emergency stop button is in the out position.
- Press up on the handset to operate the Suas 140S hoist.

Your Suas 140S hoist is ready for use.

Actuator Orientation

The actuator should be fitted and positioned as detailed in photograph. It is possible to rotate the actuator through 180 degrees to prevent the motor of the actuator contacting the Clients knees or feet but this results in restricted access to the Emergency Lower function. Therefore Suas Portable Hoist recommend, wherever possible, to have the actuator in the orientation shown.

Safety Precautions

Prior to and during use the following safety precautions must be adhered to:-

- Always plan any lifting operations prior to commencing the lift
- Always carry out the daily Checklist before use
- Always familiarise yourself with the operating controls and functionality of the hoist prior to use.
- Always carry out any lifting operation in line with the recommendations within this User Manual.
- Do not lift a patient unless you have been trained and are competent to do so.
- Do not attempt to lift a patient on a slope exceeding 5 degrees.
- Do not attempt to manoeuvre the hoist across a slope greater than 5 degrees.
- Always manoeuvre the hoist by the handle provided and never by the mast, boom or patient.
- Do not attempt to push or pull a loaded hoist over any uneven or rough undulating terrain.
- Do not attempt to push a loaded hoist over any obstruction or obstacle that the castors cannot accommodate without reducing the hoist stability.
- Do not use a sling with hoist unless is it is clearly specified and identified for a patient, by a risk assessment, undertaken by a competent person.
- Never use a sling that shows any sign of adverse wear or damage particularly fraying or thinning material.
- Always ensure that any sling, identified as compatible with the hoist, is of the correct size and is suitable for the patient.
- Always lower the patient to the lowest suitable position when carrying out a transfer.
- Never carry out a patient transfer with the brakes of the hoist in a locked position.
- Do not interfere with the actuator, handset or battery. Should a fault occur then cease using the hoist and contact an Suas Hoist approved agent.
- Never force any of the hoist controls. They are designed for ease of use and excessive force may damage the product and affect functionality.
- Do not use this hoist in a wet environment outdoors.
- Do not charge the hoist in a wet or humid environment.
- This hoist is designed for a single patient transfer only within the recommendations identified and it is not suitable for any other type of lifting operations.

Note:
This hoist is designed to be operated by a suitably qualified attendant and should not be operated by the Patient unless such attendant is present.

Controls

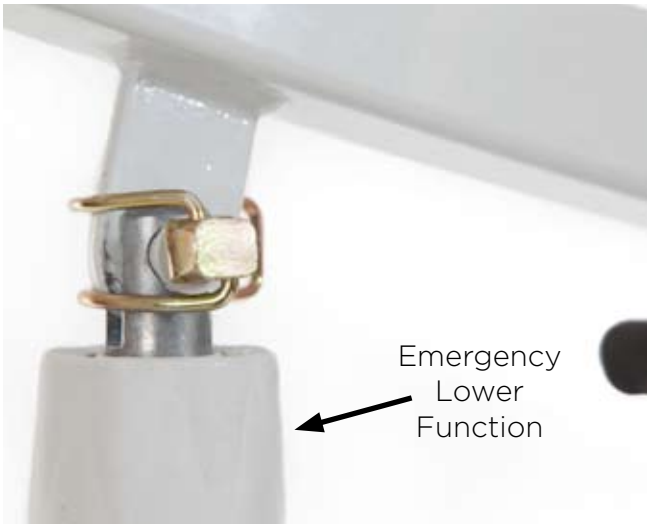
Check the hand control for correct functioning in both directions. The handset works on a ‘push to run’ basis whereby it only operates when a directional arrow is pressed and stops when released. Check the fit of the hand control plug and socket. Inspect the charging socket for damage prior to use.

Operating Instructions

Raising and Lowering of the Boom:- the boom movement is controlled by the actuator. The raising and lowering is controlled by the operation of the buttons on the handset. Directional arrows indicate travel. The handset connects directly into the controller. The actuator has a built in stop that activates once it's maximum limit of travel is reached.

Emergency Lower Function

At the top of the actuator is a collar. This can be rotated, in the event of power loss, to lower the boom of the hoist.



Emergency Stop Function

Emergency Stop Button:- is a red button located at the side of the battery/control box and should only be depressed in an emergency. This will stop any raising or lowering operation immediately. Raising or lowering of the boom can commence once the button has been rotated clockwise and returns to its original position.

Castors and Braking

There are two braked castors on the hoist. Prior to commencing and during a lifting operation these brakes should be in an unbraked condition and free to rotate. With the brakes unlocked the hoist, during the lift, will find it's own centre of gravity. If the brakes are locked during a lift this will drag the patient to the centre of gravity of the fixed positioned hoist which may cause anxiety and discomfort to the patient and also compromising the stability of the hoist.

Leg Adjustment:- this hoist is fitted with a manual leg adjustment to assist with the lifting operation. Leg adjustment is carried out by operating the leg adjustment handles. Leg adjustment should only be carried out prior to the lift commencing or when lifting is completed. For optimum stability it is recommended to keep the legs in a closed position. When manoeuvring the unladen hoist through doorways or around obstacles it is recommended that the legs are closed to the narrowest position also. Ensure that the legs do not come into contact with fixed obstacles when adjustment is carried out as this may damage the legs and have an adverse affect on the hoist functionality.

Batteries/Control System:- If battery capacity is low the hoist can be placed on charge and continue to be used if necessary. When doing this care must be taken not to move the hoist and force the mains power cable to detach in an uncontrolled manner.

Slings:- The Suas hoist range can be used with a number of slings of varying size and type. Prior to sling selection a full risk assessment must be undertaken of both the client and environment in which the hoist is to be used.

Charging the Battery:- when the battery requires charging insert the mains lead into the handset. Allow to charge for approximately 8 hours to obtain maximum lifting capacity. A fully charged battery, in good condition, should allow 20 full lift cycles depending upon range of lift, ambient temperature and weight of patient.

- Wherever possible ensure that the battery is fully charged before use. The battery cannot overcharge so the hoist can be placed on charge when not in use.
- Never allow the battery to remain in an uncharged condition.
- It is best if the battery is not allowed to be completely run dry. The battery cannot be overcharged as it runs on a trickle system. If the battery is left permanently plugged in it will only take sufficient charge to keep it topped up. As the battery runs low you will hear a continuous beep when the handset is pressed. At this point the battery should be charged. The light on the charger will show yellow indicating that the battery is low and is charging. When the battery is fully charged the light will show green.
- The battery should never be accessed by unauthorised personnel, always seek guidance from an Suas approved agent.
- Ensure the mains charger is switched off before connecting or disconnecting to the battery.
- Do not leave charger switched on with the battery disconnected.
- Never leave a battery connected with the mains power switched off.

Mains Adaptor:- the mains adaptor for the hoist charger is a standard UK 3 pin plug. European or American plugs are available.

Daily Checks

Suas Hoists recommend that a number of daily checks should be undertaken prior to using the hoist. The following is a list that should be undertaken daily to reduce the risk of product failure and patient injury:-

- Ensure the hoist legs open and close correctly and are free from distortion or damage.
- Ensure that the handset operates correctly and the boom raises and lowers accordingly.
- Check the battery has sufficient charge to carry out any required operation. If not place on charge and allow to charge accordingly.
- Ensure the hoist can move freely on the castors and braked castors have a functional lock and unlock mechanism.
- Ensure the hooks on the boom are free from damage prior to attaching any sling.
- Ensure that all components of the hoist are correctly assembled, positioned correctly and all fasteners are securely fastened.
- Visually inspect any slings to be used. Do not use a sling that exhibits any sign of wear or frayed edges.

Cleaning & Decontamination

The hoist should be cleaned in accordance with it's usage. Where possible all powder coated painted surfaces should be cleaned with a damp cloth and mild cleaning soap solution. Do not use abrasive cleaning products. Ensure that no liquids are allowed to access the control system, battery, handset and actuator.
After use in a bathroom wipe all surfaces with a clean dry cloth.

Maintenance

Suas Hoists recommend that the hoist is inspected biannually by a competent and qualified person. This inspection and test should include the hoist, accessories and any slings. Suas Hoists recommendations are in line with the UK inspection guidelines as detailed in The Lifting Operations and Lifting Equipment Regulations 1988. For use outside the UK please check local country specific guidelines.

Maintenance Guidelines

- Sling Attachment Hooks – inspect for excessive wear.
- Boom – check the attachment of the boom to the mast. Ensure that any sideways movement is minimal. Check the actuator mounting point.
- Mast – check the operation of the mast locking device. Check bottom actuator mounting point.
- Control System – Check hand control function. Check all connections.
- Leg Adjustment – check both leg adjustment linkages are secure, free from damage and operate smoothly.
- Leg Pivots – ensure pivots are free from any build up of dirt or foreign bodies. Remove and lubricate with a light grease where necessary to maintain smooth operation.
- Castors – check that all castors are securely attached, free from any damage and any dirt or foreign bodies. Check braked castors operate correctly. Lubricate with a light grease where necessary.
- Actuator – the actuator should be maintenance free. Cycle from highest point to lowest to determine smooth operation. If excessive noise is present replace actuator.
- Emergency Lower – check function with maximum user weight applied to the hoist boom.
- Emergency Stop – check function with a load applied to the hoist boom.
- Hydraulic Unit (where applicable) –

check for correct operation and ensure no fluid leakage is evident.
- Battery – requires no inspection as it is maintenance free.
- Cleaning – the hoist should be cleaned with a damp cloth using only a mild detergent. Chemical and abrasives can damage the hoist and should be avoided to prolong the lifespan of the hoist.
- Slings – check as part of visual check or load test. Identify any wear or frayed edges.
- Load Test – testing to be carried out in accordance with UK LOLER 1988 guidelines.

Inspection & Servicing

Spreader Bar:
1. Inspect for excessive wear on the sling hooks and any side suspenders used in conjunction with the spreader bar.

Boom:
1. Check the boom/mast pivot is fully tightened
2. Make sure there is only minimal side movement of the boom and it is aligned with the centreline of the hoist
3. Check for wear on the actuator unit mounting.
4. Check the security of the actuator unit fixing to the boom.
5. Maintenance – lubricate boom/mast pivot and actuator unit mounting.

Mast:
1. Ensure the mast fully engages in the mast socket.
2. Check the security of the fixings.
3. Check the operation of the mast-locking device.
4. Check for wear on the actuator unit mounting
5. Check the security of the actuator unit fixing to the mast
6. Confirm any cables coming from the mast are adequately protected from chaffing.
7. Maintenance – lubricate the actuator unit mounting.

Electric Controls, Plugs & Sockets
1. Check the hand control for correct functioning in both directions.
2. Check the fit of the hand control plug and socket.
3. Inspect the charging socket for damage
4. Check the main fuse for correct rating
5. Check fuseholder for firm fitting and possible damage.
6. Check the function of the emergency lower.

Electric Actuator
1. Check for smooth operation in both directions.
2. Confirm power cut-out at the ends of travel.
3. Listen for unusual noise which may indicate future break down

Batteries/Control System Unit
1. Check the fit of the charger plug to the hoist charging socket.
2. Confirm the charger unit is charging the hoist.
3. Check the charger unit is fitted with the correct rated fuse. (When fitted).
4. Check mains plug is fitted with the correct rated fuse.
5. Check the safety of the input and output lead wiring

Leg Adjustment (Manual)
1. Check the leg adjustment handle for fit and security.
2. Operate both leg adjustment handles and confirm smooth opening and closing of the legs.
3. Check there is a firmly attached handgrip.
4. Check for wear on the linkage ball joints.
5. Confirm the linkage attachments are secure.
6. Make sure the legs are parallel to each other and the centreline of the hoist.
7. Maintenance – lubricate the central pivot of the leg adjusting lever.

Leg Pivots:
1. Check the legs are free to pivot. Any

stiffness must be investigated. Strip out the leg pivots and lubricate with a light mineral-based grease if in any doubt.
2. Make sure there is no excessive play in the leg pivots.
3. Make sure the leg pivots are retained securely.
4. Maintenance – lubricate the pivot pins.

Castors:
1. Check all castors for firm attachment to the legs.
2. Check for free rotation of the castor and the wheels.
3. Remove any build up of threads, hair or fluff.
4. Check correct operation of the brakes.
5. Maintenance – lubricate swivel and axle bearings.

Slings And Accessories
1. Confirm sling is a compatible sling.
2. Check the load bearing straps for wear or fraying.
3. Check the straps are securely stitched.
4. Check the body of the sling for wear or cuts in the fabric.
5. Check any side suspenders for wear on the hooks or central suspension point.

Thorough Examination Report

Patient lifting devices and lifting accessories should receive a thorough six-monthly inspection and test.

Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
LOLER requires certain information to be included in a periodic report given to a customer after a thorough examination.
The information can be found in Schedule 1 (page 56) in the LOLER L113 publication.

Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
An authorised service dealer will issue a thorough examination report upon satisfactory completion.
Note: where necessary a load test should be performed subject to the examination results

Load Test

The load test should be carried out in accordance with the manufacturers test procedures. It is strongly recommended an authorised service dealer carry out the testing.

Certification

An authorised service dealer will issue a test certificate after satisfactory completion of the load test
NOTE: The certificate may be incorporated into the Examination Report

Technical Specification

Safe Working Load		140kg
Maximum Overall Length		94cm
Minimum Overall Length		89cm
Maximum Overall Height (top of spreader bar)		175cm
Minimum Overall Height (top of mast)		105cm
Maximum Reach		44cm
Turning Radius		95cm
Legs Open	External Width	96cm
	Internal Width	89cm
Legs Closed	External Width	36cm
	Internal Width	28cm
Overall Height of Legs		11cm
Ground Clearance		6.7cm
Front Castors		7.5cm
Rear Castors		7.5cm
Hoist Frame		Manufactured from mild steel

Weights

Mast & Boom	8.6kg
Base Assembly	13.75kg
Assembled Hoist	26kg

Electrical Specifications

Battery	12V rechargeable sealed lead acid
Battery Capacity	2.0 AH 24V DC
Charger Rated Input	220-240V AC 50Hz – 36 VA
Charger Rated Output	29V 1.1A

Environmental Conditions

Operating Temperature Range	5deg Celsius – 40 deg Celsius
Storage Temperature	-10 deg Celsius - +50 deg Celsius

IP Ratings

Control Box	IP43
Actuator	IP66
Charger	IP65
Battery	IP65
Handset	IP65

Duty Cycles

Actuator	10% (2min/18min)
Charger	Approx 4 hours

Wrapping the Unit.

- Lay the travel wrap flat out on the floor with all 4 pairs of internal velcro straps extended straight out from the centre

- Wheel the base unit over the travel wrap with the battery/charger unit at the end where the side panel flaps are wider

- Place the folded 'boom attached to upright' onto the base with the upright underneath the boom (i.e. resting on the travel wrap) and then rest the handles on the end of the base legs (i.e. opposite end to battery/charger unit)

- Place the actuator such that the rectangular motor unit rests in the space between the battery/charger bar and the mast holding bar

- Lie the remaining upright in parallel to the legs against the other upright

- Hook the handset to one of the handles so that you can charge the unit when stored vertically without the need to unwrap the unit

- Do up the 4 pairs of internal velcro straps as tightly as possible to secure the parts together. Note: At the mast end of the base pass the lengthwise velcro straps between the battery/charger bar and the mast holding bar

- Do up the lengthwise cover flaps, securing tightly using the velcro on the long cover straps

- Do up the side panel flaps, securing tightly using the Velcro on the side panel flaps

EC Declaration of Conformity

This is to certify that the:

Suas 140s Portable Compact Hoist

Conform to the Requirements of Council Directive 93 / 42 / EEC relating to Medical Devices Class 1 Products, BS EN12182 for Technical Aids for Persons with a Disability – General Requirements & Test Methods, BS EN ISO 10535 Hoist For The Transfer of Disabled Persons – Requirements & Test Methods and EN14971 Application Of Risk Management For Medical Devices.

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Managing Director

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Issue date

Atlas Portable Compact Hoist Limited

Wrapping the Unit (Photos).